WHAT IS CLAIMED IS:

1. An image processing method, comprising:

an extracting process of extracting a characteristic amount of an input image;

5   a generating process of generating a high frequency component of the input image;

a gradation converting process of converting a gradation of the input image on the basis of the characteristic amount; and

10   an adding process of adding the high frequency component to the input image whose gradation has been converted.

2. An image processing method according to claim
15 1, wherein said adding process includes a correcting process of correcting the high frequency component.

3. An image processing method according to claim 2, wherein said correcting process is used for
20 correcting the high frequency component according to a pixel value of the input image.

4. An image processing method according to claim 2, wherein said adding process is used for correcting
25 the high frequency component according to a characteristic of said gradation conversion.

5. An image processing method according to claim 1, wherein said generating process includes a smoothing process for smoothing the input image and a subtracting process for subtracting the smoothed image from the

5   input image.

6. An image processing method according to claim 5, wherein a morphological filter is used for said smoothing process.

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7. An image processing method according to claim 1, further comprising:

a converting process of converting the image to which said high frequency component has been added

15   according to the characteristic amount.

8. An image processing method according to claim 1, wherein the input image is a medical image.

20   9. An image processing method according to claim 1, wherein the input image is an image within an irradiation field included in a photographed image.

10. An image processing method according to claim 1, further comprising:

25   claim 1, further comprising:

an adjusting process of adjusting gradation conversion conditions used for said gradation

converting process on the basis of an instruction of a user.

     11.   An image processing method, comprising:

     an extracting process of extracting a characteristic amount of a medical input image; and

     an output process of outputting the medical image for which a first or a second dynamic range conversion has been performed, having the first dynamic range converting process of converting a dynamic range using a first algorithm on the basis of the characteristic amount and the second dynamic range converting process of converting a dynamic range using a second algorithm on the basis of the characteristic amount.

     12.   An image processing method according to claim 11, further comprising:

     a selecting process of selecting the first or second dynamic range converting process according to a region represented by the medical input image.

     13.   An image processing method according to claim 11, further comprising:

     a selecting process of selecting the first or second dynamic range converting process according to a manual instruction of a user.

14. An image processing method according to claim 11, wherein the first dynamic range converting process includes a generating process of generating a high frequency component of the medical input image, a gradation converting process of converting a gradation of the medical image on the basis of the characteristic amount, and an adding process of adding the high frequency component to the gradation-converted medical image.

15. An image processing apparatus, comprising:

extracting means for extracting a characteristic amount of an input image;

generating means for generating a high frequency component of the input image;

gradation converting means for converting a gradation of the input image on the basis of the characteristic amount; and

adding means for adding the high frequency component to the input image whose gradation has been converted.

16. An image processing apparatus, comprising:

extracting means for extracting a characteristic amount of a medical input image; and

output means for outputting the medical image for which a first or a second dynamic range conversion has

been performed, having the first dynamic range

converting means for converting a dynamic range using a

first algorithm on the basis of the characteristic

amount and second dynamic range converting means for

5   converting a dynamic range using a second algorithm on

the basis of the characteristic amount.

17.   A recording medium which stores a program,

said program comprising the steps of:

10   extracting a characteristic amount of an input

image;

generating a high frequency component of the input

image;

converting a gradation of the input image on the

15   basis of the characteristic amount; and

adding the high frequency component to the input

image whose gradation has been converted.

18.   A recording medium which stores a program,

20   said program comprising the steps of:

extracting a characteristic amount of a medical

input image; and

outputting the medical image for which a first or

a second dynamic range conversion has been performed,

25   having first dynamic range converting means for

converting a dynamic range using a first algorithm on

the basis of the characteristic amount and second

dynamic range converting means for converting a dynamic
range using a second algorithm on the basis of the
characteristic amount.

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